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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/022,365 | 12/20/2001 | Takashi Inayama | Q67168 | 3562 |

7590 09/26/2003
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
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Washington, DC 20037-3202

EXAMINER

WALSH, BRIAN D

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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3722

DATE MAILED: 09/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/022,365

Applicant(s)

INAYAMA, TAKASHI

Examiner

Brian D. Walsh

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 21-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6,7,9. 6) ☐ Other: _____

FINAL ACTION

Information Disclosure Statement

1. The Examiner notes that Applicant has submitted three separate Information Disclosure Statements (PTO-1449) on 15 May 2003, 06 June 2003 and 09 July 2003, respectively. The Examiner has noted that 6 separate forms were received in the Office and no two were identical in both the date submitted and the citations included. The Examiner has included a copy of all 6 forms for Applicant to review and confirm that all intended references were included since it is apparent that an error of some type has occurred.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 21 and 23 are finally rejected, as necessitated by amendment, under 35 U.S.C. 102(e) as being anticipated by Kumar et al.

Regarding claim 21, Kumar et al. discloses a cutting tool comprising an end cutting edge (14) at an end of a rake face (16) and a depression (32) formed in the rake face so as to provide the cutting edge with a concave edge portion (this element is most easily seen in figure 3). The depression has a curved peripheral surface that is a portion of a sphere (Col. 2, lines 43 – 47).

Kumar et al. fails to label the depth and width of any particular portion of the spherical depression. However, it is clear in figures 3, 4 and 5 that a depth of the edge portion is less than a maximum depth of the depression (32). This is most clearly illustrated in figure 5 which is a view of figure 4 taken along 5-5. Element (32) points to a point that is nearly at the maximum depth of the depression. Since the section view of 5-5 is taken approximately through the center of the depression it can be seen in figure 5 that the concave edge portion of the depression has a lesser depth than that of the maximum depth of the depression.

Kumar et al. also fails to label the width of the concave edge portion and the maximum width of the depression. However, it is clear in figure 4 that the maximum width of the depression is greater than the width of the concave edge portion.

Regarding claim 23, Kumar et al. discloses all of the elements as set forth in the above rejections. Furthermore, it is clear in figures 3 and 7 that the spherical depression formed in the rake face extends continuously from the concave edge portion of the end cutting edge.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 22 and 24 are finally rejected, as best understood, under 35 U.S.C. 103(a) as being unpatentable over Kumar et al. in view of Simpson, III (hereinafter Simpson).

Regarding claims 22 and 24, Kumar et al. discloses all of the elements as set forth in the above rejections, however, Kumar et al. fails to set forth that the depression can be of a spheroid configuration.

Simpson discloses a cutting insert with a cutting edge having a depression that continues into the body of the insert along the rake face similar to both the instant invention and Kumar et al. It is clear in figure 5 that the curved peripheral surface is *at least* a portion of a spheroid, being not perfectly round for at least that portion.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the depression of Kumar et al. to include the spheroid depression taught by Simpson since Simpson teaches the use of this depression in order to narrow a chip during a machining operation (Col. 4, lines 2 – 7).

Response to Arguments

4. Applicant's arguments have been considered but are not persuasive. The Examiner maintained the use of Simpson to reject the “spheroid” elements of the invention. Applicant did not argue the use of Simpson in this regard and, therefore, the Examiner assumed Applicant found the use of Simpson in that regard to be acceptable.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Faxing of Responses to Office Actions

6. In order to reduce pendency and avoid potential delays, TC 3700 is encouraging FAXing of responses to Office Actions directly into the Group at (703) 872-9302. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the Examiner and art unit at the top of your cover sheet. Papers submitted via FAX into TC 3700 will be promptly forwarded to the Examiner.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Walsh whose telephone number is (703) 605-0638. The examiner can normally be reached on Monday - Friday 7:30 A.M. to 4:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on (703) 308-2159. The fax phone numbers for

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the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

BDW

BDW
August 26, 2003

A. L. Wellington
A. L. WELLINGTON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700